

BIG CYPRESS SWAMP AND SOUTHWESTERN COASTAL AREA

02291597 SOUTH BRANCH ESTERO RIVER AT ESTERO, FL

LOCATION.--Lat 26°25'43", long 81°47'36", in NW ¼ sec.34, T.46 S., R.25 E., Lee County, Hydrologic Unit 03090204, near left bank on downstream culvert headwall on Corkscrew Road, 1.1 mi east of U.S. Highway 41 at Estero and 3.9 mi upstream from mouth of Estero River.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--February 1987 to current year.

REVISED RECORDS.--WDR FL-2000-2A, 1999.

GAGE.--Satellite data collection platform with water-stage shaft encoder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Water years 2000 and 2001 at datum 0.30 ft higher than current datum. Water years 1987-1999 at datum near 0.30 ft higher than current datum (original benchmark destroyed during road construction in July 1999). Days of no flow occurred during water years 1996, 1999, 2000.

ANNUAL MEAN AND ANNUAL RUNOFF (AC-FT) SUMMARY STATISTICS.--Figures represent 15 complete water years of discharge (1989-98, 2000-2004).

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.55	3.00	2.82	2.82	3.21	3.25	2.84	2.80	2.64	2.82	5.32	5.65
2	7.07	2.98	2.81	2.85	3.16	3.19	2.84	2.78	2.64	2.84	5.37	5.75
3	6.62	2.99	2.81	2.88	3.13	3.14	2.83	2.80	2.64	2.81	5.23	5.76
4	6.23	3.00	2.80	2.90	3.13	3.11	2.82	2.82	2.64	2.81	5.17	5.74
5	5.86	3.17	2.80	2.90	3.11	3.08	2.81	2.80	2.64	2.85	4.92	6.12
6	5.46	3.39	2.80	2.90	3.10	3.06	2.81	2.78	2.64	2.84	5.00	6.62
7	5.09	3.32	2.79	2.89	3.09	3.04	2.81	2.77	2.64	2.81	5.01	6.57
8	4.81	3.25	2.79	2.90	3.07	3.01	2.82	2.77	2.64	2.78	4.84	6.36
9	4.58	3.19	2.78	2.91	3.06	2.98	2.82	2.76	2.64	2.76	4.48	6.16
10	4.39	3.13	2.78	2.93	3.06	2.97	2.81	2.76	2.64	2.81	4.21	6.03
11	4.22	3.09	2.78	2.92	3.05	2.95	2.81	2.76	2.64	2.96	4.25	5.80
12	4.07	3.06	2.77	2.98	3.06	2.94	2.85	2.75	2.64	3.05	4.61	5.55
13	3.95	---	2.77	2.97	3.09	2.94	2.90	2.75	2.65	2.96	5.45	5.32
14	3.87	---	2.81	2.98	3.15	2.93	2.87	2.74	2.69	2.90	7.14	5.20
15	3.80	2.97	2.82	2.99	3.17	2.93	2.84	2.74	2.73	2.86	7.09	5.09
16	3.67	2.99	2.83	3.01	3.02	2.93	2.83	2.75	2.73	2.83	6.71	4.91
17	3.58	2.98	3.02	3.02	2.99	2.94	2.82	2.74	2.71	2.83	7.06	4.73
18	3.51	2.94	2.94	3.16	2.96	2.92	2.81	2.73	2.69	2.83	7.96	4.56
19	3.44	2.93	2.91	3.11	2.94	2.91	2.80	2.72	2.69	3.07	7.40	4.38
20	3.37	2.93	2.88	3.01	2.93	2.90	2.80	2.72	2.68	3.77	6.73	4.19
21	3.31	2.90	2.88	2.97	2.91	2.90	2.79	2.71	2.67	3.86	6.16	4.06
22	3.26	2.89	2.86	2.94	2.89	2.90	2.79	2.71	2.66	3.68	5.76	3.98
23	3.21	2.88	2.86	2.93	2.88	2.88	2.78	2.70	2.65	3.51	5.46	3.84
24	3.16	2.87	2.86	2.91	2.88	2.88	2.78	2.69	2.65	3.33	5.14	3.71
25	3.11	2.86	2.85	2.90	3.39	2.87	2.77	2.69	2.69	3.47	5.12	3.61
26	3.09	2.86	2.84	2.93	3.93	2.87	2.77	2.69	2.71	3.68	5.13	3.85
27	3.07	2.85	2.83	3.00	3.56	2.86	2.76	2.68	2.76	3.91	5.37	3.93
28	3.06	2.85	2.83	3.01	3.36	2.86	2.76	2.68	2.87	5.50	5.86	3.85
29	3.08	2.84	2.82	3.02	3.29	2.85	2.76	2.67	2.85	6.52	6.01	3.72
30	3.05	2.82	2.82	3.06	---	2.85	2.78	2.65	2.82	6.17	5.88	3.61
31	3.03	---	2.82	3.21	---	2.85	---	2.65	---	5.66	5.73	---
TOTAL	129.57	---	87.78	91.91	90.57	91.69	84.28	84.76	80.58	107.48	175.57	148.65
MEAN	4.18	---	2.83	2.96	3.12	2.96	2.81	2.73	2.69	3.47	5.66	4.96
MAX	7.55	---	3.02	3.21	3.93	3.25	2.90	2.82	2.87	6.52	7.96	6.62
MIN	3.03	---	2.77	2.82	2.88	2.85	2.76	2.65	2.64	2.76	4.21	3.61

02291597 SOUTH BRANCH ESTERO RIVER AT ESTERO, FL-Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	174	5.2	2.4	1.2	5.2	8.3	2.0	1.1	0.21	1.7	74	87
2	155	4.8	2.3	1.4	4.0	7.1	2.0	1.0	0.17	1.9	76	91
3	134	4.9	2.2	1.6	3.4	6.1	1.9	1.1	0.15	1.6	71	92
4	116	5.0	2.0	1.7	3.5	5.5	1.8	1.3	0.16	1.7	69	91
5	100	9.0	2.0	1.7	3.3	4.9	1.7	1.1	0.19	2.1	60	106
6	84	14	1.9	1.7	3.2	4.5	1.7	0.98	0.20	1.9	62	122
7	70	12	1.8	1.6	3.2	4.2	1.8	0.91	0.22	1.6	63	112
8	60	11	1.7	1.6	3.0	3.7	1.8	0.89	0.25	1.4	57	102
9	52	9.2	1.6	1.7	2.9	3.4	1.7	0.82	0.26	1.2	45	94
10	45	7.8	1.6	1.9	3.0	3.2	1.6	0.78	0.27	1.7	37	89
11	40	6.8	1.5	1.7	3.0	3.0	1.6	0.78	0.29	3.5	38	80
12	35	6.2	1.3	2.3	3.1	2.9	2.0	0.75	0.32	4.5	49	71
13	32	e5.3	1.3	2.2	3.6	2.8	2.4	0.72	0.37	3.1	84	63
14	30	e3.8	1.6	2.2	4.8	2.8	2.1	0.66	0.54	2.4	153	59
15	27	4.5	1.7	2.4	5.7	2.7	1.8	0.61	0.85	2.0	151	56
16	23	4.8	1.8	2.5	2.9	2.8	1.6	0.66	0.82	1.7	133	50
17	20	4.7	3.9	2.6	2.6	2.9	1.5	0.63	0.69	1.7	150	45
18	19	4.0	2.8	5.4	2.3	2.6	1.5	0.58	0.65	1.7	195	40
19	17	3.9	2.3	3.8	2.2	2.5	1.4	0.54	0.63	6.0	166	35
20	14	3.8	2.0	2.5	2.1	2.4	1.3	0.51	0.58	24	134	29
21	13	3.4	1.9	2.0	2.0	2.5	1.2	0.47	0.57	26	108	26
22	11	3.2	1.7	1.7	1.9	2.5	1.2	0.46	0.55	21	91	24
23	10	3.1	1.7	1.5	1.8	2.4	1.2	0.44	0.52	16	80	20
24	8.7	3.0	1.6	1.4	1.8	2.3	1.1	0.38	0.52	11	68	16
25	7.7	2.9	1.6	1.3	14	2.2	1.0	0.36	0.72	15	67	13
26	7.2	2.9	1.5	1.4	29	2.2	0.99	0.35	0.83	21	67	21
27	6.7	2.8	1.4	2.1	17	2.1	0.99	0.33	1.2	28	76	24
28	6.4	2.8	1.3	2.2	11	2.1	0.93	0.31	2.2	84	95	22
29	6.9	2.6	1.2	2.2	9.3	2.0	0.91	0.27	2.0	124	102	18
30	6.3	2.4	1.2	2.8	---	2.0	1.1	0.23	1.7	109	96	15
31	5.9	---	1.2	5.1	---	2.0	---	0.21	---	87	90	---
TOTAL	1,336.8	159.8	56.0	67.4	154.8	102.6	45.82	20.23	18.63	609.4	2,807	1,713
MEAN	43.1	5.33	1.81	2.17	5.34	3.31	1.53	0.65	0.62	19.7	90.5	57.1
MAX	174	14	3.9	5.4	29	8.3	2.4	1.3	2.2	124	195	122
MIN	5.9	2.4	1.2	1.2	1.8	2.0	0.91	0.21	0.15	1.2	37	13
AC-FT	2,650	317	111	134	307	204	91	40	37	1,210	5,570	3,400

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2004, BY WATER YEAR (WY)

	31.2	11.2	4.10	3.25	5.17	3.58	1.45	0.76	6.54	17.8	33.4	43.1
MEAN	31.2	11.2	4.10	3.25	5.17	3.58	1.45	0.76	6.54	17.8	33.4	43.1
MAX	220	59.5	28.6	13.6	57.4	31.5	8.66	4.69	29.8	60.7	126	142
(WY)	(1996)	(1999)	(1998)	(1998)	(1998)	(1998)	(1987)	(1987)	(1996)	(1992)	(1995)	(1995)
MIN	4.87	0.61	0.30	0.29	0.10	0.10	0.07	0.01	0.17	0.85	2.60	4.91
(WY)	(1989)	(1993)	(1991)	(1997)	(1997)	(1997)	(2000)	(2000)	(1988)	(2000)	(1989)	(1990)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1987 - 2004

ANNUAL TOTAL	6,250.44		7,091.48		
ANNUAL MEAN	17.1		19.4		13.2
HIGHEST ANNUAL MEAN					33.6
LOWEST ANNUAL MEAN					2.03
HIGHEST DAILY MEAN	195	Sep 30	195	Aug 18	410
LOWEST DAILY MEAN	0.04	May 27	0.15	Jun 3	0.00**
ANNUAL SEVEN-DAY MINIMUM	0.08	May 22	0.18	May 31	0.00**
MAXIMUM PEAK FLOW			210	Aug 17	440
MAXIMUM PEAK STAGE			8.24	Aug 17	12.60
INSTANTANEOUS LOW FLOW			0.14	Jun 2	0.00**
ANNUAL RUNOFF (AC-FT)	12,400		14,070		9,540
10 PERCENT EXCEEDS	44		77		37
50 PERCENT EXCEEDS	6.8		2.6		2.0
90 PERCENT EXCEEDS	1.5		0.64		0.21

e Estimated

** Many days during water years 1996,1999, 2000.

The period of record statistics were computed from complete water year's of record. See the annual mean and annual runoff (ac-ft) summary statistics section of the manuscript.